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Committee on the Peaceful Uses of Outer Space

412th Meeting
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Vienna

Chairman: Mr. Hohenfellner ..... (Austria)

The meeting was called to order at 10.10 a.m.

Report of the Scientific and Technical Subcommittee (A/AC.105/605) (*continued*)

Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (*continued*)

Mr. Zaman (Pakistan): My delegation would like to express its satisfaction at the progress made by the Scientific and Technical Subcommittee during its thirty-second session. The United Nations Programme on Space Applications, carried out by the Office for Outer Space Affairs, has been making efforts not only to discharge its mandate but also to enhance its scope of activities in the light of the UNISPACE 82 recommendations, within the meagre financial resources available to it. My delegation would like to express its appreciation to the member States and specialized agencies that are providing in-kind or in-cash support for continuing the Programme's activities. My delegation recommends that our Committee should continue to work towards getting the allocation adequately enhanced to meet the actual requirements of the Programme.

Mr. Muhammed Nasim Shah of Pakistan was not able to participate in the thirty-second session of the Subcommittee as the Chairman of the Working Group of the Whole, due to his important assignments at SUPARCO. However, he will be available for the next session of the Subcommittee, scheduled to be held in 1996.

It is satisfying to note that the General Assembly, in its resolution 49/34, agreed that the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space could be convened in the near future. My delegation strongly supports the idea of holding UNISPACE III as soon as possible. In view of the availability of the comprehensive background documents prepared by the Office for Outer Space Affairs, the working papers presented by member States, the report of the Working Group of the Whole of the Scientific and Technical Subcommittee, and the latest question-and-answer statement of the representative of India, my delegation feels that it should not be difficult now to reach a conclusion on this item.

My delegation undertakes to be fully cooperative, accommodating and flexible to facilitate a speedy consensus on this matter.

The Office for Outer Space Affairs, through the Programme on Space Applications, has been very active in the specific applications of space technology through its initiative aimed at establishing regional centres for space science and technology education in developing countries. While my delegation is fully appreciative of these efforts, it holds the view that the concerns expressed yesterday by the delegation of China merit careful consideration.

During the past few sessions of the Scientific and Technical Subcommittee and of the Committee itself, concern has been expressed at the pollution of the space

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environment by space debris. Consequently, the General Assembly endorsed, in its resolution 48/39, the recommendation of the Committee on the Peaceful Uses of Outer Space (COPUOS) to add an item on space debris to the agenda of the Subcommittee for consideration beginning at its 1993 session. My delegation would like to express its appreciation for the scientific and technical presentations made at the thirty-second session of the Subcommittee on the various aspects of space debris. It notes with satisfaction that the Subcommittee has adopted a specific multi-year work plan to study in detail the various elements involved. As to the question of placing this item on the agenda of the Legal Subcommittee, we not only share but fully endorse the very eloquently expressed views of the delegation of Brazil.

My delegation would like to place on record its appreciation for the two esteemed world bodies, Committee on Space Research (COSPAR) and the International Astronautical Federation (IAF), for organizing, on an annual basis, symposiums on various themes at the annual sessions of the Scientific and Technical Subcommittee. During these symposiums, many illustrative technical presentations have been made on state-of-the-art developments in and applications of space science and technology. We hope that, in keeping with their past practice, COSPAR and IAF will continue to arrange such presentations in future, in view of their immense utility for the world's scientific community.

Mr. Senkevitch (Russian Federation) (*interpretation from Russian*): The delegation of the Russian Federation would like to share some views on the problem of space debris in the context of a more careful study of the topicality and importance of this issue, possible ways and means and stages of solving the problem, efforts to reach agreement between member States of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), and prospects for related activities in the Scientific and Technical Subcommittee and in the Legal Subcommittee.

Allow me first to express an opinion on the scientific and technical side of this work. We are all witness to the intensification of space activity, and there is a corresponding increase in the level of technically generated pollution in near-Earth and medium-altitude space, in the geostationary orbit, on the Moon and on other celestial bodies. Of course, in different parts of outer space and on different celestial bodies, the levels of pollution are different. Hence, as was rightly pointed out by the delegation of Germany in its statement, we need different approaches to the study of this problem and different means of overcoming it in different parts of space.

In near-Earth space, at altitudes of up to 800 kilometres, the probability of collision between debris and large components of spacecraft is relatively high, and for particles measuring more than 1 millimetre it is 0.1 to 0.3 over a period of 10 years. If the average impact velocity of the colliding particle and the spacecraft is 12 kilometres per second, then the particle may penetrate the casing of the satellite or manned space station to a depth of 5 millimetres. For this reason, manned stations, such as the Mir space station, cannot be deployed without costly protective shields. In this regard, both in Russia and in other countries, scientific and experimental work is being carried out with a view to, for example, manoeuvring orbital space facilities to ensure that they avoid collision with artificial objects.

Another very critical issue is the pollution of the geostationary orbit. In other areas of near-Earth space and on celestial bodies, the problem of pollution is not yet quite so critical. With regard to the geostationary orbit, all States are aware of this phenomenon and its unique features relating to space communications, television broadcasting, monitoring, meteorology, missile-attack warning systems and other endeavours. The geostationary orbit is a limited resource that must be exploited economically for the benefit of all mankind. In the Russian Federation's view, with respect to the problem of space debris, the following tasks are important: the development and implementation of measures designed to reduce the pollution of near-Earth space; the development and experimental verification of a model for space pollution, including observable and non-observable space objects; the organization of work to observe particles of space debris and timely forecasting and notification of possible collisions between space objects and space debris; the development of issues related to the design of spacecraft and systems under conditions of technically generated and natural space pollution; and the development of ways and means of shielding spacecraft against the effects of high-velocity particles of space debris.

In Russia, the space control service has already been in operation for a long time and has been steadily improved. This service draws on the latest land and space facilities. There are plans for satellites that, through minimal adjustments to existing facilities, will make it possible to approach large fragments of space debris and spacecraft that have ceased operations. In the

geostationary orbit this will make it possible, for example, to give pieces of debris the push needed to remove them into less saturated areas of space, at 3,000 to 5,000 kilometres above their home orbit, or to slow them down so that they will burn up as they re-enter the dense layers of the Earth's atmosphere. In general, the development of work on these problems is being carried out in the Russian Space Agency's central scientific research institute for machine construction and the space centre named after Khrunicheva in Moscow. In the near future, as we have already stated, in the context of a federal programme to reduce space pollution — a programme known as ECOS-RF, RF standing for Russian Federation — we plan to hold an international seminar on the problem of space pollution in Moscow, to be followed by an international conference in Obninsk on space exploration, power engineering and "eco-civilization". Both of these events will continue the development of scientific ideas and practical recommendations in this sphere.

Our delegation endorses the Scientific and Technical Subcommittee's policy of attaching high priority to careful development at an expert level of the scientific and technical aspects of this problem — ways of modifying the extent of the orbit's saturation with debris, mathematical modelling of the debris environment and determining its parameters — and the problems of enhancing spacecraft to ensure that they are properly shielded against collisions with debris, for example. We support the work plan adopted by the Scientific and Technical Subcommittee on the problem of space debris. We would like once again to recall the work being done in the context of the Interagency Orbital Debris Coordination Committee (IADC), established by the space agencies of Russia, the United States, Europe and Japan. Our delegation has already made a proposal on the establishment of contacts between our Committee and the Inter-Agency Coordination Committee. We think that such a practice would be useful and should very quickly lead our work to concrete results.

I would like to say a few words about the legal aspects of the problem of space debris. As the Committee knows, there was a divergence of views in the Legal Subcommittee. Some States say it is necessary, first of all, to have empirical data and operational experience on space debris, whereas others believe that this is not necessary and are ready to consider the problems immediately.

We believe that any course of action divorced from its scientific and technical starting-point will lack a solid foundation and could produce dubious and ill-conceived ideas. In our view, the Committee could recommend that the Interagency Orbital Debris Coordination Committee consider establishing a small *ad hoc* legal group with a limited membership, which could develop initial specific proposals and submit them to this Committee for consideration. We need to devise a better organized liaison between the Committee and the IADC.

Mr. Moutsoulas (Greece): My delegation is pleased, Sir, to see you chairing this Committee once again. Your experience and skills will guarantee the success of the Committee's work.

The report of the Scientific and Technical Subcommittee reflects the accomplishments of a very successful session, a session that was conducted by Professor John Carver, who has managed over the past 25 years to bring to the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space (COPUOS) the spirit of scientific competence and responsibility that governs his own professional life.

During the 37 years that have passed since the establishment of this Committee in 1958, remarkable developments have occurred. Today, space matters are not the concern of super-Powers alone; they concern every country, regardless of its population and its wealth. Applications of space technology in environmental studies and in communications are of interest to everyone. It was therefore inevitable that the small *ad hoc* Committee of 1958 should have been transformed into a large Committee that can accommodate the expectations, as well as the anxieties, of all nations.

The argument has been made that a Committee of 61 members cannot work efficiently. The comprehensive report of the Scientific and Technical Subcommittee provides the best reply to that argument; it is well known that the efficiency of a Committee depends not on the number of its members, but, rather, on the Chairman's skill and the spirit of cooperation among member States. My delegation is confident that the new members of COPUOS will adapt to the Committee's work, as they did during the session of the Scientific and Technical Subcommittee, and, in harmony with our skilful and experienced Chairman, will contribute to the success of the Committee's work.

With reference to space debris, my delegation endorses the statement made by the representative of

Germany. A good understanding of the scientific and technical aspects of the problem is necessary before we proceed to setting up any rules.

On the matter of the dissemination of meteorological satellite data, my delegation took note of the comment made by the Turkish delegation regarding the acquisition of data at a reasonable cost. I would like to inform the Committee that Greece has in operation a high resolution picture transmission system, and I am pleased to inform all our neighbouring countries that Greece is prepared to offer advanced very-high-resolution radiometer data, as well as the processed information, at no cost, in the spirit of good-neighbourly cooperation. This offer can be formally included in the provisions of the relevant bilateral agreements for scientific and technical cooperation already existing between our respective countries.

As members know, collaboration between neighbours is always desirable in any scientific field. However, cooperation in atmospheric studies and monitoring is absolutely necessary. One must not forget that the elements that unite nations are more numerous by far than those that divide them. Everyone is aware of the poverty that dominates the majority of the Earth's population and of the environmental degradation that plagues our planet today. The applications of space technology in the areas of agriculture, natural-resource exploration and pollution-monitoring can provide solutions to these problems. Moreover, we note that space communications have diminished distances between nations and have contributed to world-wide understanding of our common problems.

I am pleased to state that Greece is contributing to the joint efforts on space applications. In the field of remote-sensing education, Greek universities are cooperating with other European universities within the framework of European Union programmes. Moreover, special courses have been developed for the optimal exploitation of the data of the high resolution picture transmission (HRPT) system of the National Meteorological Service. As my delegation has reiterated on several occasions, Greece continues to hold the strong idealistic belief that educational programmes should not be restricted by national boundaries. In this context, I would welcome any prospective student who might wish to participate in our space-education programmes.

I would also like to announce that, in the field of satellite communications, the preparatory phase of the HELLASAT project has been completed.

I would like in conclusion to stress that scientific competence and a good understanding of today's problems, at the global level, constitute the most appropriate way to smooth differences and prepare the ground for a peaceful world.

Mr. Jahedi (Islamic Republic of Iran): My delegation recognizes the objectives of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, which would clearly reaffirm the promotion of the effective use of space technology to assist in the solution of problems of regional and global significance, and to strengthen the capacity of Member States, in particular developing countries, to apply space research to problems of economic and social development.

Further, with regard to the additional scientific and technical component of a third UNISPACE and the seminars and workshops proposed to be held as part of the Conference, organized by interested specialized agencies of the United Nations and other international organizations on topics relevant to their expertise and mandates, my delegation expresses its willingness to expand existing cooperation with interested bodies. This would be a significant contribution to the training, research and education that are the objectives of UNISPACE III.

In view of the priority that the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space attached to the promotion of greater exchange of actual experience in space applications — it recommended appropriate assistance and called in particular upon international financing agencies to support demonstration projects to provide opportunities for hands-on experience in space technology and applications for the developing countries through direct involvement in such applications processes — my delegation remains hopeful that this particular area will be granted the priority that it deserves, although some programme activities have encountered certain financial dilemmas in the implementation process, and some have been cancelled.

I should like, in conclusion, to state my delegation's belief that there is a salient need to consider the convening of UNISPACE III in a developing country as soon as possible. In fact, my delegation believes that a UNISPACE III would not only contribute to the smooth implementation of proposed pilot projects of UNISPACE

82 but also determine whether or not the objectives of UNISPACE 82 have been fully met. A UNISPACE III would evaluate the achievements of UNISPACE 82 and allow for comment on whether such conferences should be held at all in the future.

Finally, my delegation expresses its appreciation to Professor John Carver of Australia for his 25 years' outstanding and devoted effort in chairing the Scientific and Technical Subcommittee. We share the view of other delegations that developing countries should play a potent role by occupying the chairmanship of that Subcommittee.

Mr. Zvedre (Russian Federation) (*interpretation from Russian*): In continuing the Committee's consideration of a Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III), I should like to outline my country's provisional, initial views.

One cannot fail to pay due tribute to the authors of the working document on the possibility of holding a UNISPACE III. The problems that are listed demonstrate very clearly the vast range of problems confronting mankind as it tries to conquer outer space in the interests of all countries. This prompts the space States to assess their activities objectively and fully through the prism of how they conform to the new criteria emerging from the rapidly developing technological revolution and the principles of equitable and mutually advantageous cooperation.

It would be foolish to dispute that mankind's crossing of new thresholds in outer space science and technology and related fields, including electronics, computer technology and material and other sciences, opens up new horizons for their practical implementation in the interests of all countries and requires a deep re-examination by all members of the world community.

We have no doubt, and have no hesitation in saying, that it is desirable that all States, including those that are not involved in outer space, participate in the discussion of issues concerning the use of space for peaceful purposes. At the same time, it is clear that neither the motivation nor the themes provisionally chosen for such a wide-ranging forum as UNISPACE III should give rise to any impression that implementation of its recommendations would result in regulation of international cooperation of outer space that would in any way replace or qualitatively change the bilateral and multilateral mechanisms for this cooperation.

In principle, we are not against the idea of convening such a Conference in the near future. However, we believe that at this stage it would be counterproductive to artificially force the adoption of actual recommendations with regard to its agenda, its venue and the circumstances of its convening — in other words, all the preparatory work involved in the holding of a conference.

We are rather more impressed by the arguments adduced by the proponents of very well structured, gradual preparation for this wide-ranging forum — those who say that we should make haste slowly. Indeed, it is very important to see that the thrust and the themes are properly chosen. As those who have laid out guidelines for the agenda have indicated, matters connected with the transition from the military to the civilian use of outer space could be one of the themes. This would be all the more relevant and topical if we were able to organize, parallel with the Conference, a demonstration of conversion applications of outer space technologies capable of being implemented.

I do not want to get embroiled in ideological approaches. I believe that it is necessary to focus on the practical issues of the development of outer space technology. We should not repeat what was said at the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Spaceor allow for any even indirect politicization of the issues involved.

Furthermore, with regard to the proposed UNISPACE III agenda, we cannot but note the many cross-references and even overlaps in respect of issues that are already handled by the Committee on the Peaceful Uses of Outer Space as a whole and its two Subcommittees, as well as provision for discussion and adoption of actual cooperation projects with an outer space component, involving the United Nations Environment Programme, the United Nations Industrial Development Organization and specialized agencies such as the United Nations Educational, Scientific and Cultural Organization, the International Civil Aviation Organization, the International Telecommunication Union, the Food and Agriculture Organization of the United Nations and other bodies. There is overlap at various points. In any case, we should certainly avoid a situation in which the effectiveness of the work done by these organizations could in any way, directly or indirectly, be called into question.

Questions having to do with scheduling must be approached realistically. A painstaking conceptual review of major recent advances in the exploitation of outer space and an attempt to balance the interests of outer-space States and developing countries cannot be addressed with undue haste and without proper consideration of experience already acquired.

We believe that a realistic time for convening another outer space conference might be early in the coming millennium.

The Chairman: There are no more speakers on agenda item 7, so we shall move on to agenda item 6.

Report of the Legal Subcommittee on the work of its thirty-fourth session (A/AC.105/607)

Mr. Marchán (Ecuador) (*interpretation from Spanish*): The delegation of Ecuador has studied carefully and with interest the items the General Assembly assigned to the Legal Subcommittee by the terms of paragraph 4 of resolution 49/34.

I turn first to the question of early review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space. My delegation joined the consensus in the Legal Subcommittee that with respect to applicability and validity we should not undertake revision of the Principles or begin a debate on that subject. This in no way diminishes the significance of the topic. To the contrary, my delegation feels that, precisely because of its undeniable importance, possible review of the subject would be fully justified at a time judged to be proper for modifying and enhancing the Principles in the light of new technological developments. In the meantime, compliance with the Principles by States that make use of nuclear power in outer space is not merely appropriate, but necessary. The use of nuclear power can benefit the international community on a basis of confidence and reliability only with the adoption of measures to avoid all risks and negative impact that the improper use of these resources could entail for the Earth environment or for near-Earth space.

I turn now to item 4 of the Subcommittee agenda, which concerns matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit. As members know, this item has historically been of great interest to my country owing to its location at the equator. I should begin by noting that my delegation does not share the view that consideration of this item should be divided, which we believe would prejudge the legal status of the geostationary orbit in international space law. Indeed, the question of the geostationary orbit has been historically linked to that of the definition and delimitation of outer space, or vice-versa, precisely because it has not been determined whether it belongs to the legal regime that applies to outer space by virtue of the 1967 Treaty, or whether — given its special characteristics, its geophysical link to gravitational forces generated at the equator and other specific technical attributes that mark it as a limited natural resource — it merits a *sui generis* regime, as my delegation and others believe it does.

Hence, we believe that using a procedural gimmick suddenly to divide an item that has always been examined as one would amount to an a priori judgement of a basic question. The two matters are not considered together arbitrarily. While they are different, they are not mutually exclusive; they are parallel lines with a prudent distance between them: progress made along one line today may help advance the other tomorrow.

The delegation of Ecuador is not opposed in principle to possible review of the Committee's working methods if it results in better, more efficient use of our time. But we cannot support proposals that, on the pretext of speeding up our work or making it more flexible, have a substantive effect. My delegation joined other countries in the Legal Subcommittee in opposing the separation of two subjects of item 4 or — even worse — shelving or freezing it.

My delegation believes that the comparatively slow pace of our consideration of these subjects cannot be attributed to their being grouped under a single agenda item, but rather to the intrinsic complexity of the two matters. Still, we should acknowledge that some progress has been achieved, and that, in the light of the combined debate on the item, many countries have been changing their positions and drawing closer to a consensus.

For all those reasons, my delegation does not think it would be a good idea to split item 4 of the Subcommittee agenda. Precisely because of its complexity and the interrelation of its two subjects, it must be viewed as a single whole. I repeat my country's interest in continuing study of this subject in the same manner as it has always been carried out.

My delegation remains convinced that it is necessary to define the boundary between airspace and outer space.

Although this Committee decided in 1959 that the delimitation of outer space was not a subject that required priority attention, that judgement, which was perhaps valid when it was pronounced, cannot be considered to apply in perpetuity. My delegation therefore bases its view on practical considerations, and an increasingly widespread *opinio juris ge..eralis* that has been accepted into doctrine.

The current situation, in which outer space is not delimited, can favour only those actors who, by virtue of their technological resources, can make use of outer space without any type of boundary. But the fact that few States currently have access to outer space does not make it unnecessary to define and delimit the area within which activities fraught with legal, political and economic consequences for all members of the international community are carried out.

The situation prevailing in 1959, only two years after the first satellite was launched into outer space, is nothing like the current one. Outer space activities have increased considerably, becoming ever more frequent and complex. As a result, the subject of definition and delimitation is in turn becoming even more imperative. It is not a matter only of boundaries, but also of establishing clearly, as in the case of the law of the sea, what activities should be conducted under the regime of State sovereignty and what activities are *res communis omnium*, under an international regime.

The delegation of Ecuador believes that, within the general framework of international relations, the definition and delimitation of outer space will make it possible to plan a more harmonious and orderly development of State activities in outer space on the threshold of the next millennium. As we have said in the past, we think that there are no legal impediments to this; the obstacles are simply political, and as such they can be overcome through the will and decisiveness of States. The Legal Subcommittee's adoption of the questionnaire concerning aerospace objects is a step forward, and the responses to that questionnaire can help us in our future work on this subject.

My delegation would like to thank the Russian Federation for submitting the working paper containing the first questionnaire concerning aerospace objects. We also thank the Chairman of the Working Group, Mr. Eugenio Curia of Argentina, for having led the discussions making it possible for the questionnaire to be adopted in the Legal Subcommittee after lengthy deliberations.

I should like to conclude this part of my statement, on the definition and delimitation of outer space, by quoting Mr. Zhukov, the treaty expert, who, at the twenty-third colloquium on outer space law, held in Tokyo in September 1980, said:

> "I should like to express my deep conviction that a final delimitation of aerospace and outer space will promote greater international cooperation in the exploration and use of outer space".

Space pollution in the geostationary satellite orbit continues to increase because of the growing amount of space debris in that limited natural resource. This not only has a negative impact on the orbit's saturation rate, but also constitutes a risk for space travel, for the smooth conduct of telecommunications and for the very safety of States. It also affects future access to that resource.

That is why my delegation favours not only the study and scientific and technical analysis of the issue, but also its legal consideration by COPUOS. Hence, Ecuador joins those countries that propose more in-depth treatment of the item on space debris in the Legal Subcommittee, which is responsible for all legal and political aspects relating to the geostationary satellite orbit. This work could not be undertaken by the International Telecommunication Union (ITU) because its sphere of action is limited to specific technical aspects.

The transfer to a disposal orbit of geostationary satellites before the end of their service life is one of the proposals that the Legal Subcommittee could study in this area. In any event, whatever the most viable technical proposal might be, the important thing, in our view, is to emphasize that the responsibility of States cannot end when the service life of satellites comes to an end. Rather, as in the case of objects governed by article VIII of the 1967 outer space Treaty, a State on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such an object as long as it is in outer space or on a celestial body.

As we have always stated in addressing the subject of the geostationary satellite orbit, my delegation believes it is necessary to establish a *sui generis* legal regime to regulate access to and the utilization of that orbit. This regime must take account of various factors, including legal aspects, the fact that the orbit is a limited natural resource, its special technical characteristics and attributes and its geophysical link to gravitational

phenomena that occur only in the plane of the Earth's equator.

Being essentially a limited natural resource, the geostationary satellite orbit requires a special international statute that would fully guarantee equitable access. To be equitable, this cannot be based just on technological advantages — a principle of first come, first served, for example — but should also take into account the relative disadvantages of the developing countries and, of course, the special geographical situation of equatorial countries with respect to the orbit.

The orbit regime should therefore, on an equitable basis, take into account the interests of all parties: developed countries, developing countries and equatorial countries.

My delegation will study with keen interest the revision of the working paper on orbit that the delegation of Colombia will submit to the Legal Subcommittee at its next session.

Finally, with reference to legal aspects relating to the application of the principle that the exploration and use of outer space must be carried out for the benefit and in the interests of all States, especially the developing countries, my delegation wishes to reiterate the importance of international cooperation for improving the endogenous knowledge and capacities of the developing countries and the need to foster their programmes and projects. In this context, we welcomed the various proposals put forward containing extremely useful elements for a possible declaration of principles relating to international cooperation.

Mr. Schrogl (Germany): At this year's session of the Legal Subcommittee the French and German delegations submitted a working paper on the agenda item on space benefits in order to express a new approach to mutually fruitful and beneficial cooperation. We consider our paper a contribution to achieving progress in the matter of space benefits and to preventing a deadlock in the debate.

The German-French working paper rests on two basic considerations: first, that States are free to determine all aspects of their cooperation — whether it be bilateral or multilateral, commercial or non-commercial — including, of course, development cooperation; and, secondly, that States will choose the most efficient and appropriate mode of cooperation in order to allocate resources efficiently.

By introducing these two considerations we have taken the path which has for many years been successfully followed in establishing space cooperation between our governmental agencies and private entities and other countries, including developing countries, for their mutual benefit. So the German-French Working Paper describes the framework of tested and successful space cooperation.

In the discussion on space benefits the German-French Working Paper received a very positive response and strong support from a wide range of delegations. We appreciate the constructive comments and suggestions made by many delegations. We will carefully consider them and feel encouraged to introduce a revision 1 of the German-French paper to the Legal Subcommittee at its thirty-fifth session, next year. We are optimistic that in the coming years a consensus on space benefits will be achieved in the Legal Subcommittee on the basis of our paper.

As to the topic of matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, the Legal Subcommittee adopted procedures to promote the debate at the next session. We hope that further progress can be achieved in these matters on the basis of the satisfactory work done by the International Telecommunication Union, which has ensured equitable access to and rational use of, the geostationary orbit so far.

Concerning the principles relevant to the use of nuclear power sources in outer space, we are pleased that consideration of this agenda item was suspended in the Legal Subcommittee at its session this year. As these principles were adopted by the General Assembly only three years ago, we believe that for the time being there is no necessity for an early review and possible revision of the nuclear power source principles in the Legal Subcommittee. In our view, consideration of this agenda item should also be suspended at the next session, in 1996.

In considering the issue of the duration of the session of the Legal Subcommittee, we welcome the Subcommittee's implementation of the practice of allocating very flexibly the time needed for the discussion of current agenda items. We think that this is an appropriate procedure that should be followed in the next session, without prejudice for other sessions. This arrangement, however, should not preclude other efforts

to further enhance the efficiency of the work of the Legal Subcommittee.

Mr. Perek (Czech Republic): Last year we proposed the separation of the definition of Outer Space, on the one hand, and the geostationary orbit, on the other, which had been discussed under a single agenda item for a number of years. The proposal found some support in statements of other delegations. It is necessary to state, with all due respect for differing opinions, that the connection of the two items has not led to progress in the last several years.

The definition or delimitation of outer space is an important question. It should be agreed upon, because it would serve a useful purpose in the future. Had we agreed on the definition in the past, it would have served a useful purpose today. Unfortunately, over the course of many years, no consensus was reached on the necessity of defining the border between airspace and outer space, and preference has been given to waiting for a possible problem to arise. Only the future will show if this was the best possible course of action.

A consensus, however, cannot be reached without political will. Therefore, the Committee should keep its freedom to remove that item from the agenda unless the recent initiatives lead to an acceptable solution. The Committee should not be restricted in its decisions by having this item linked to another, quite separate, item.

From the perspective of the geostationary orbit, which is an integral part of outer space, the Committee, again, should keep its freedom to deal with that item as necessary. There are indeed new developments there. In the course of the session of the Scientific and Technical Subcommittee we heard the presentation by the representative of the International Telecommunication Union (ITU) on a recommendation adopted by the ITU Radiocommunication Assembly in 1993 dealing with the geostationary orbit. In an annex to the recommendation, a definition of the geostationary orbit was presented for the purpose of considering environmental measures. According to that definition, the geostationary orbit is a torus of a thickness of plus or minus 300 kilometres around a mean Earth radius of 42,164 kilometres. It extends to 15° north and south.

Previous definitions of the geostationary orbit dealt with the same Earth radius, but the height of the torus corresponded to permissible deviations from the nominal position — that is, 0.1°. The new definition means an extension of the north/south dimension of the torus by 150 times. The reason for this extension is the new practice introduced — for example, by the International Telecommunications Satellite Organization — to dispense in some cases with north/south station-keeping in order to save fuel. As a consequence, the inclination of the satellite starts increasing immediately after the satellite has been positioned into the geostationary orbit, by almost 1° per year. The inclination will increase for 27 years, to a maximum of 15°, corresponding to a linear excursion from the equatorial plane of about 10,000 km. The frequency of these excursions is fairly high — twice daily: one to the north, the other to the south. According to the definition of the International Telecommunication Union (ITU), the satellite is considered to be in the geostationary orbit even when it is that far from the equatorial plane. This regime under no circumstances corresponds to what used to be called "a fixed position with regard to a point on the surface of the Earth".

My delegation is of the opinion that in our discussions account should be taken of the above-mentioned recommendation of the ITU, which appeared in one of the United Nations documents. We also consider of basic importance the statement of the ITU representative — made in a technical presentation during the session of the Scientific and Technical Subcommittee — that all requests for positions in the geostationary orbit have been met so far, thanks to the coordinating process instituted by the ITU. Therefore, we see no reason to change the ITU's present practice.

Mr. Navalgund (India): The delegation of India considers that progress in international space law should keep pace with the rapid technological and applications changes taking place in the field of outer space. For several years space technology has been developing rapidly, and the developments have been providing new possibilities and directions for applications. These developments are characterized by missions involving large and complex space systems, on the one hand, and, on the other hand, missions involving a very large number of small and micro satellites.

The spatial, spectral and temporal capabilities of Earth observation systems have been growing rapidly. Developments in the space segment of telecommunications services are characterized by several technological advances in terms of extension of lifetime, spacecraft power handling and communications payload design. New services, such as mobile telecommunications, are growing at a faster rate, and here space technology is expected to play a key role.

The rapid pace of these developments in technology and applications has also given rise to several issues that need appropriate solutions from the legal angle. Hence, more rapid progress on the legal front is essential. There are many problems that need solutions from the legal point of view, including - to name only a few - aspects such as preservation of the space environment; the equitable use of space resources; issues relating to intellectual property rights arising from advances in space technology and its applications; principles governing international cooperation; and international principles for trade in and the transfer of technology in fields relevant to the peaceful uses of outer space.

We believe that simultaneously with the consideration of matters concerning improvement of the methods of the Legal Subcommittee there should be consideration of various needs and substantial matters in respect of further development of international law related to outer space, and that this should be given the necessary priority.

I should like now to make a few brief remarks on the various items on the Legal Subcommittee's agenda.

On the question of revision and review of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, we strongly endorse the Subcommittee's decision that the principles which have already been adopted by the General Assembly should remain valid in their current form until amended. Further, we consider that the scope and objectives of any revision should be thoroughly considered, from the scientific and technical point of view, by the Scientific and Technical Subcommittee.

We also suggest that States currently using nuclear power sources in outer space should inform the members of the Committee and the United Nations about their efforts with regard to implementation of or compliance with the Principles already adopted by the General Assembly. Such action could provide the necessary confidence in the international community to ensure the safe use of nuclear power sources — a matter about which all States are concerned.

Turning to the definition and delimitation of outer space and the geostationary orbit, we wish to reiterate that these are subjects of fundamental importance. We note that we have yet to make substantial progress. We welcome the initiatives that have been considered by the Legal Subcommittee, and we look forward to further progress.

The Legal Subcommittee has had the question of outer space benefits on its agenda for a few years. Our delegation attaches great importance to progress on this item. In this regard, it also welcomes the useful discussions and exchanges of views that have taken place. In this context, we consider that the working paper submitted by a group of developing countries, which is being considered by the Subcommittee, provides a good basis for discussion. We also welcome very much the working paper submitted by Germany and France, which will facilitate further progress on this matter.

As a party to the outer space Treaty of 1967, we are strongly committed to the principles enshrined in it and we urge that further development of international measures to strengthen its implementation be encouraged. Recalling the principle, enshrined in the Treaty, that the exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries irrespective of their degree of economic or scientific development and shall be the province of all mankind, we urge the promotion of international cooperation, in addition to that in the development of international programmes, to assist more robustly the development of indigenous capacity that could equip the relevant States to conduct activities related to the peaceful uses of outer space to meet their priority needs.

Mr. Suárez (Mexico) (*interpretation from Spanish*): The Mexican delegation has studied carefully and with great interest the report submitted by the Legal Subcommittee on its thirty-fourth session. We are convinced that our Committee has before it a balanced document, which not only brings together the contributions or points of view of those delegations interested in the work of the Subcommittee, but also represents an excellent tool to guide our discussions on the subjects grouped under this agenda item.

With regard to the content of the report, my delegation would like to refer, first, to the question of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space. We consider that it is not enough to include this item on the agenda of the two Subcommittees, for there is a danger of giving the impression that discussion of the subject has stagnated, that progress has not been made in dealing with it, thus leading some delegations to consider the possibility of excluding it from the Committee's agenda, without including new items.

It might be asserted that in some way this situation constitutes an obstacle to progress in the process of revising the Principles. In these circumstances, my delegation would like to express its concern that all subjects on the agenda be given in-depth consideration.

With respect to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, the position of the Government of Mexico is based on the precedent that a definition of outer space must rest on practical considerations rather than on geographical arguments or delimitations. This could encourage the search for convincing formulas for determining the best way to make rational and fair use of the geostationary orbit in conformity with International Telecommunication Union principles.

I turn now to the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States. Here, my delegation refers to the informal working paper submitted by the Chairman of the Working Group on this item, which aimed to synthesize and reconcile the most viable proposals set out in the working papers before the Group. The first was submitted by a group of delegations, including my own, and the second by the delegations of France and Germany. It was understood that this important contribution by the Chairman of the Working Group would be discussed in 1996. None the less, my delegation wants to put on record that it looks forward with great interest to the revised text of the informal working paper and hopes that it will be considered in the near future.

Finally, my delegation turns to the item entitled "Working methods and agenda of the Legal Subcommittee". I take this opportunity to reiterate the views my delegation stated at the last session of the Legal Subcommittee: the consideration of items should continue until it is complete, seeking to use the full period of the session; the Subcommittee should reject ideas or manoeuvres intended to reduce our working time, when these stratagems are aimed at preventing the timely and full coverage of the issues; the addition of new items to the Subcommittee agenda should be promoted; and a preliminary document should be prepared setting out the views of delegations interested in a legal regime to prevent the proliferation of space debris and to control space debris, and in the universal applicability of the five international legal instruments that comprise space law.

Mr. Maclure (United States of America): My delegation would like to offer some general remarks on this agenda item.

At the outset, my delegation wishes to express our satisfaction with the superb leadership provided the Subcommittee by its Chairman, Mr. Václav Mikulka of the Czech Republic. In many ways, it was through his efforts that this year's deliberations of the Subcommittee were ultimately so successful.

At this point my delegation will choose to forgo reiterating the views of the United States on the substantive agenda items of the Subcommittee. Those views are well known and were fully discussed at the Subcommittee's last session. Instead, my delegation simply wishes to comment briefly on two aspects of the Subcommittee's work.

First, the United States is pleased with the progress made on improving the working methods of the Subcommittee, yet firmly believes that more can be accomplished. My delegation and others have called for such improvements for many years, and the United States was gratified to see action taken on specific measures, including the length of the session and the use of conference services, that should heighten the Subcommittee's efficiency and effectiveness as time goes by. The United States was particularly encouraged by the spirit of compromise that characterized the Subcommittee's debate throughout the session.

Finally, looking to the future, the United States considers it important that the Committee remember the role the Legal Subcommittee plays in promoting international cooperation in outer space affairs. When the Committee was first established, the General Assembly gave it the mandate to study the nature of international legal issues that might arise in the exploration of outer space. With that mandate in mind, my delegation believes that matters considered by the Subcommittee should not unnecessarily impede or inappropriately interfere with the space-related activities of member States.

As well, when viewed from a legal standpoint, the use and exploration of outer space provides unique and complicated challenges, and full benefit will be derived from the Subcommittee only if it follows an objective, considered and systematic approach to its work. This

necessarily means that any new topics added to the Subcommittee's agenda must have sufficient content to promote and advance international understanding of relevant legal questions concerning the peaceful uses of outer space.

The meeting rose at 11.40 a.m.